

Savitribai Phule Pune University Board of Studies - Automobile and Mechanical Engineering Undergraduate Program - Mechanical Engineering (2019 pattern)

Course Code	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks						Credit				
		ΗT	PR	TUT	ISE	ESE	MT	PR	OR	Total	TH	PR	TUT	Total	
Semester-V															
<u>302041</u>	Numerical & Statistical Methods	3	-	1	30	70	25	-	I	125	3	-	1	4	
302042	Heat & Mass Transfer	3	2	-	30	70	-	50	-	150	3	1	-	4	
<u>302043</u>	Design of Machine Elements	3	2	-	30	70	-	-	25	125	3	1	-	4	
<u>302044</u>	Mechatronics	3	2	-	30	70	-	-	25	125	3	1	-	4	
<u>302045</u>	Elective I	3	-	-	30	70	-	-	I	100	3	1	-	3	
<u>302046</u>	Digital Manufacturing Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1	
302047	Skill Development	-	2	I	-	-	25	-	I	25	I	1	-	1	
302048	Audit course - V ^{\$}	-	I	I	-	-	-	-	I	-	I	-	-	-	
	Total	15	10	1	150	350	100	50	50	700	15	5	1	21	
Semester-VI															
<u>302049</u>	Artificial Intelligence & Machine Learning	3	2	-	30	70	-	-	25	125	3	1	-	4	
<u>302050</u>	Computer Aided Engineering	3	2	-	30	70	-	50	-	150	3	1	-	4	
302051	Design of Transmission Systems	3	2	-	30	70	-	-	25	125	3	1	-	4	
<u>302052</u>	Elective II	3	-	-	30	70	-	-	-	100	3	-	-	3	
302053	Measurement Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1	
<u>302054</u>	Fluid Power &Control Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1	
302055	Internship/Mini project *	-	4	I	-	-	100	-	I	100	I	4	-	4	
302056	Audit course - VI ^{\$}	-	-	-	-	-	-	1	-	-	I	I	-	-	
Total			14	-	120	280	200	50	50	700	12	9	-	21	
Elective-I				Elective-II											
302045	<u>302045-A</u> Advanced Forming & Joining Process				<u>302052-A</u> Composite Materials										
<u>302045-B</u> Machining Science & Technology					<u>302052-B</u> Surface Engineering										

Abbreviations: TH: Theory, PR: Practical, TUT: Tutorial, ISE: In-Semester Exam, ESE: End-Semester Exam, TW: Term Work, OR: Oral

Note: Interested students of TE (Automobile Engineering and Mechanical Engineering) can opt for any one of the audit course from the list of audit courses prescribed by BOS (Automobile and Mechanical Engineering)

Instructions:

- Practical/Tutorial must be conducted in FOUR batches per division only.
- Minimum number of Experiments/Assignments in PR/Tutorial shall be carried out **as mentioned in the syllabi** of respective courses.
- Assessment of tutorial work has to be carried out similar to term-work. The Grade cum marks for Tutorial and Term-work shall be awarded on the basis of **continuous evaluation**.
- ^{\$}Audit course is mandatory but non-credit course. Examination has to be conducted at the end of Semesters for award of grade at institute level. Grade awarded for audit course shall not be calculated for grade point & CGPA.



Savitribai Phule Pune University

Board of Studies - Mechanical and Automobile Engineering

Undergraduate Program – Final Year Mechanical Engineering (2019 pattern)

Course Code	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks							Credit			
		ΗT	PR	TUT	ISE	ESE	ΤW	PR	OR	TOTAL	ΗT	PR	TUT	TOTAL	
Semester-VII															
<u>402041</u>	Heating Ventilation Air-Conditioning and Refrigeration	3	2	-	30	70	-	-	25	125	3	1		4	
<u>402042</u>	Dynamics of Machinery	3	2	-	30	70	-	-	25	125	3	1		4	
<u>402043</u>	Turbomachinery	2	2	-	-	50	25	-	25	100	2	1	-	3	
<u>402044</u>	Elective – III	3	-	-	30	70	-	-	-	100	3			3	
<u>402045</u>	Elective - IV	3	-	-	30	70	-	-	-	100	3	-	_	3	
<u>402046</u>	Data Analytics Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1	
<u>402047</u>	Project (Stage - 1)	-	4	-	-	-	50	-	50	100	-	2	-	2	
	Total	14	12		120	330	125	-	125	700	14	6	-	20	
Semester-VIII														4	
402048	Computer Integrated Manufacturing	3	2	-	30	70	25	-	25	150	3	1	-	4	
402049	Elective V	3	2	-	30	70	25	-	25	100	3	1	-	4	
402050	Elective - V	3	-	-	30	70	-	-	-	100	3	-	-	3	
402052	Mechanical Systems Analysis Laboratory	-	2	-		-	25	-	- 25	50	-	- 1	-	1	
402052	Project (Stage - II)	-	10	-	_	-	100	-	50	150	-	5	-	5	
102000		12	16	-	120	280	175	-	125	700	12	8	-	20	
	Elective-III	Elective-V													
402044A	Automobile Design	402	2050 <i>A</i>	4	Ouality and Reliability Engineering										
402044B	Design of Heat Transfer Equipments	402	20501	B	Energy Audit and Management										
402044C	Modern Machining Processes	402	20500	C	Manufacturing Systems and Simulation										
402044D	Industrial Engineering	402	20501	D	Engineering Economics and Financial Management										
402044E	Internet of Things	402	20501	Ð	Organizational Informatics										
402044F	Computational Fluid Dynamics	402	2050I	F	Computational Multi Body Dynamics										
Elective-IV				Elective-VI											
402045A	Product Design and Development	40	2051	A	Process Equipment Design										
402045B	Experimental Methods in Thermal Engineering	40	2051	B	Renewable Energy Technologies										
402045C	Additive Manufacturing	40	2051	C	Automation and Robotics										
402045D	Operations Research	<u>40</u>	2051	D	Industrial Psychology and Organizational Behavior										
402045E	Augmented Reality and Virtual Reality	<u>40</u>	2051	E	Electrical and Hybrid Vehicle										

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• Student can select any elective subjects from the list given as per his/her choice. However, it is advised to select the subjects from within a group identified for specialization.

Instructions:

- Practical/Tutorial must be conducted in **FOUR batches per division** only.
- Minimum number of Experiments/Assignments in PR/Tutorial shall be carried out **as mentioned in the syllabi** of respective courses.
- Assessment of tutorial work has to be carried out similar to term-work. The Grade cum marks for Tutorial and Term-work shall be awarded on the basis of **continuous evaluation.**